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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,720	10/29/2003	Yusuke Kurihara	Q78067	4024
23373	7590	09/23/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			UNELUS, ERNEST	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/694,720	Applicant(s) KURIHARA ET AL.	
	Examiner Ernest Unelus	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08).
Paper No(s)/Mail Date <u>03/23/05, 04/29/04, 10/21/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C 103(a) as being unpatentable over Jiang (6,115,398).

With respect to claim 1, Jiang discloses a semiconductor laser module (14) comprising: a laser diode (12) secured on said substrate for emission of a forward laser beam (26) from a forward end thereof and for emission of a backward laser beam (28) from a point source on a rearward end thereof in a horizontal direction; and a photodiode (16) secured on said substrate, said photodiode having a light receiving surface extending in the horizontal direction by length L from an edge proximate to the laser diode for receiving a lower half of said backward laser beam, said light receiving surface being lower than said point source by a vertical distance Y (see figure 1, where the photodiode is placed lower in the substrate), said edge being spaced a horizontal distance Z from said point source of the laser diode (see figure 1, where the edge of the photodiode is spaced in a horizontal distance (Z) away from the source). Jiang fails to specifically provide $(Y/\tan \theta) - L$. However, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to locate the photodiode at that position to provide a monitor power control.

With respect to claim 2, Jiang discloses a laser diode (12) and said a photodiode (16) not covered with resin (see figure 1).

With respect to claim 3, Jiang discloses a substrate (14), which has an upper surface (15) and a lower surface (14), and wherein said laser diode (12) is secured on said upper surface and said photodiode (16) is secured on said lower surface (see figure 1).

With respect to claim 4, Jiang discloses said lower surface (14) and said light receiving surface (15) is parallel to each other (see figure 1).

With respect to claim 5, Jiang discloses a semiconductor substrate formed of silicon (col. 3, line 13).

Claim 6 is rejected under 35 U.S.C 103(a) as being unpatentable over Jiang (6,115,398) in view of Yoshida et al. (5,500,869).

With respect to claim 6, Jiang discloses a semiconductor laser device without specifically indicating the substrate being etched anisotropically. However, the substrate being etched anisotropically is well taught by Yoshida (col 11, lines 4-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to anisotropically etched the surface to attained a specific shape and depth..

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Claims 7-9 are rejected under 35 U.S.C 103(a) as being unpatentable over Jiang (6,115,398) in view of Scifres et al. (4,297,653).

With respect to claims 7 and 8, Jiang discloses a semiconductor laser device without specifically indicating the laser driver being adjacent to the photodetector on a lower substrate and remote from the laser diode. However, Scifres discloses the laser driver (32) being adjacent to the photodetector (16) on a lower substrate and remote from the laser diode (14) (see figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a laser driver in the device to provide electrical current and to place the photodiode at that position to provide a monitor power control.

With respect to claim 9, Jaing discloses everything claimed above with the exception of specifically disclosing a substrate formed with a recess in which, lower surface is created, photodiode and said laser driver are secured, further comprising: an electrode patterned on said upper surface extending from said laser diode to a position close to said laser diode; and a bonding wire for connecting said laser diode to one end of said electrode, whereby said high frequency electrical signal is supplied through said bonding wire and said electrode to said laser diode. However, Scifres discloses a substrate (12) formed with a recess in which said lower surface is created and said photodiode (16) and said laser driver (32) are secured, further comprising: an electrode patterned on said upper surface extending from said laser diode to a position close to said laser diode; and a bonding wire for connecting said

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laser diode to one end of said electrode, whereby said high frequency electrical signal is supplied through said bonding wire and said electrode to said laser diode (see figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include all of the above in the laser device to supply high frequency information signals from the laser driver to the laser diode.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bouadma et al. (US Pat. 4,692,207) discloses a laser device with a substrate and a photodetector without specifically disclosing the laser driver.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernest Unelus whose telephone number is 571-272-0218. The examiner can normally be reached on 9:00am to 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E.U


ZANDRA V. SMITH
PRIMARY EXAMINER